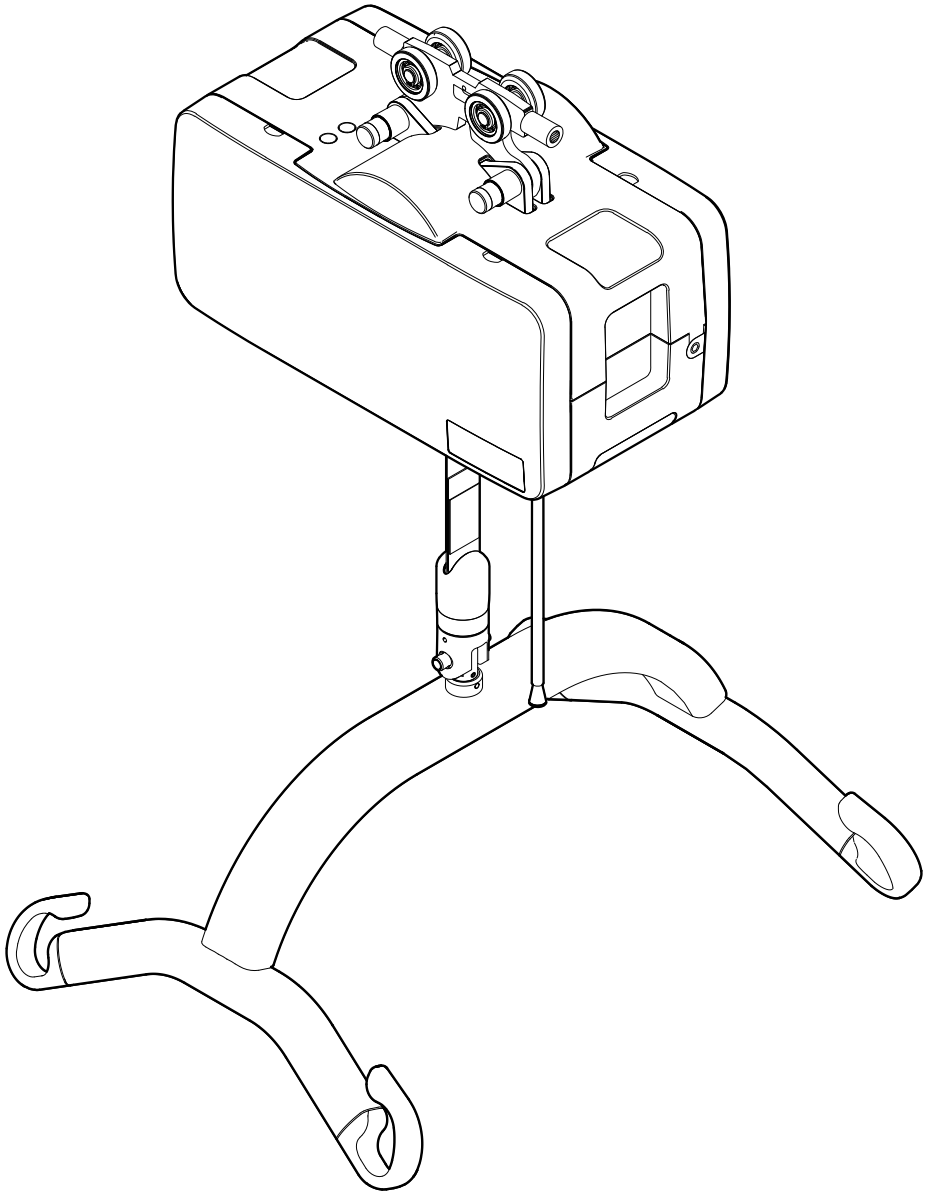
Molift Air

EN - User manual

molift
a part of Etac

BM16101 Rev. E 2015-01-15



CE

English Manual

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Important

This User Manual contains important safety instructions and information regarding the use of the lifter and accessories.

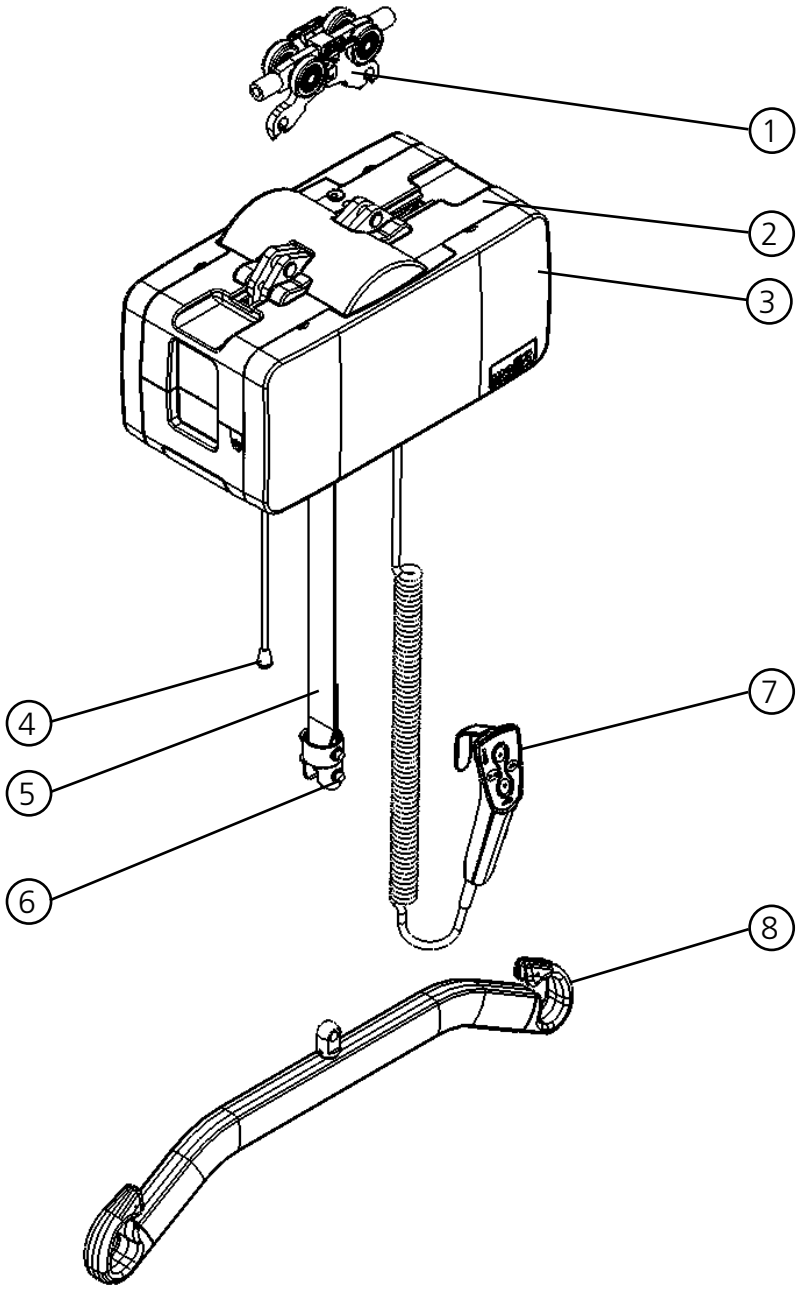
In this manual the user is the person being lifted. The assistant is the person operating the lifter.

Warning!
This symbol indicates important information related to safety. Follow these instructions carefully.

Read User Manual before use!
It is important to fully understand the content of the user manual before attempting to use the equipment.

Visit www.etac.com for download of documentation to ensure you have the latest version.

Molift Air 205/300



Hoist components:

1. Trolley
2. Hoist
3. Side covers
4. Emergency stop/ Emergency lowering
5. Lifting belt
6. Quick release pin
7. Hand control
8. Suspension

About Molift Air

Molift AIR is a strong and smooth ceiling lift that enables patients and residences to be transferred in a comfortable and safe way. Suitable for sitting and lateral transfers as well as standing and gait training situations together with the comprehensive accessory program from Molift.
Molift AIR is a very light motor which in combination with the quick release coupling system gives an easy handling when mounting and servicing

General

Declaration of conformity

The Molift Air and related accessories described in this operator manual are CE marked in accordance with EU Council Directive 93/42/EEC concerning medical devices, class 1, and has been tested and approved by a third party according to standards IEC 60601-1, IEC 60601-1-2 and NS-EN ISO 10535:2006.

Conditions for Use

Lift and transfer of a person will always pose a certain risk and only trained personnel are allowed to use the equipment and accessories covered by this user manual. The rail system must be installed by certified personnel in accordance with applicable installation instructions.

Modifications and use of components made by other manufacturers.

We recommend only using Molift components and spare parts. Declaration of conformity is not valid and Etac is not responsible for warranty if any modifications are made to the product. Etac shall not be liable for faults or accidents that can occur when using components made by other manufacturers.

Only certified personnel are allowed to open hoist or accessories to perform service or repair. Risk of injury from rotating parts and electric shock.

The lifter is not intended to be operated by the person being lifted. If a hoist is to be used by a disabled person living on their own, then some form of communication device shall be installed in the area of use of the hoist so that in the event of an emergency the disabled person is able to summon assistance. This may, for example, be the fitting of an alarm system or the supply of a conveniently placed telephone, etc.

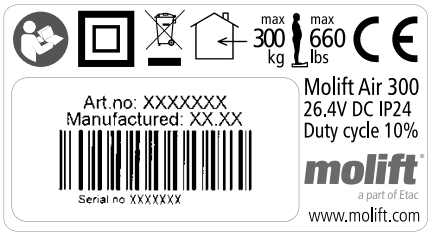
Warranty

2-year warranty against defects in workmanship and materials of our products.
For Terms and conditions, see www.etac.com

Product identification

Product label

The Product labels barcode contain article number, serial number and production date.



Warning labels and Symbols

Symbols used on the product, explained in more detail:

Class II double insulated

CE marked

Refer to user manual

Indoor Use only

max 255 kg max 560 lbs — Max user weight

Do not dispose in general waste

Emergency stop/
Emergency lowering

Service Light

Battery Light

Hex tool symbol for Manual Emergency lowering

Technical Data

Safe Working Load (SWL)

Molift AIR 205: 205 kg (450 lbs)
Molift AIR 300: 300kg (660 lbs)

Weight of unit

8,46 kg (18,65 lbs)

Battery:

Art: 2510023
26.4 V NiMH 2.2 Ah

Battery charger:

Charger for handcontrol, Mascot - type 2215

Art. no.: 1240100
100-240 V AC, 50-60 Hz max 0.9A
Output 0.9A

IRC Power Supply, Mascot - type 9920

Art. no.: 2510119
Input: 100-240 VAC, 50-60 Hz max 0.9A
Output: 24VDC 1.6A/40W

IRC Charger, Mascot - type 2515

Art. no.: 2510147
In: 20-30VDC 1.3A
Output 0.5A

Lifting speed

60mm/second (2,36 inches/second)
with 75kg (165,35 lbs) load

Propulsion motor speed

0,2m/second (7,87 inches/second)

Protection class

Hand control IP24
Lift motor IP24

Maximum A-weighted sound power level

L_{WA} = 63 dB

Operating forces button

Buttons on handset: 3.4 N

Material:

Aluminum, Plastic

Expected Lifetime:

The hoist has an expected lifetime of 30 000 cycles or 10 years.

Dimensions:

L x W x H (Length, Width, Height without trolley)

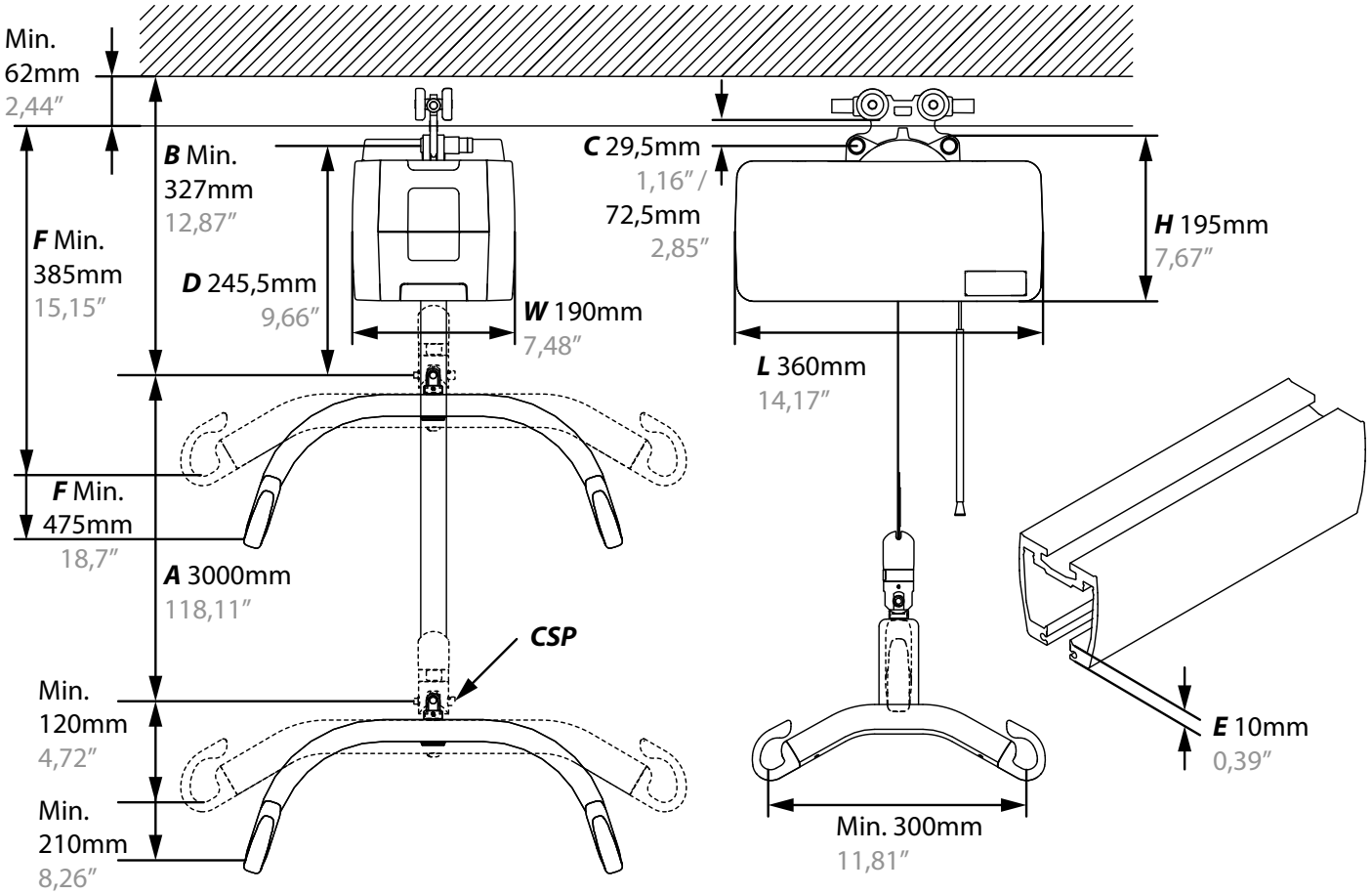
36 x 19 x 19,5 cm
(14,2 x 7,5 x 7,7 inches)

A (Hoisting Range)

300 cm (118 Inches)

B (Minimum distance from ceiling to Suspension coupling point)

32,7 cm (12.7/8 Inches)



Installation

Assembly and installation

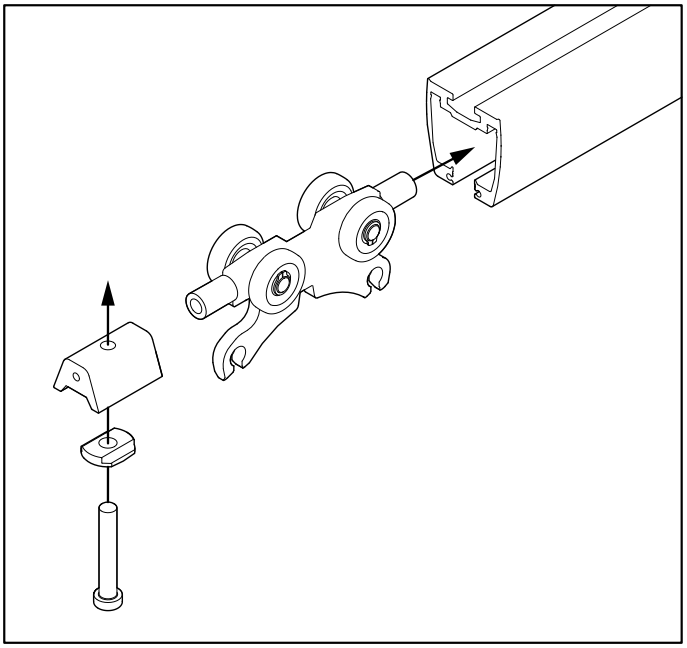
The hoist is marked with Safe Working Load (SWL), this should not exceed rail systems max load capacity.

The rail system can only be installed by certified personnel in accordance with applicable installation instructions.

Do not start using hoist before completing control according to checklist after installation.

Trolley installation

Mounting trolley in rail system

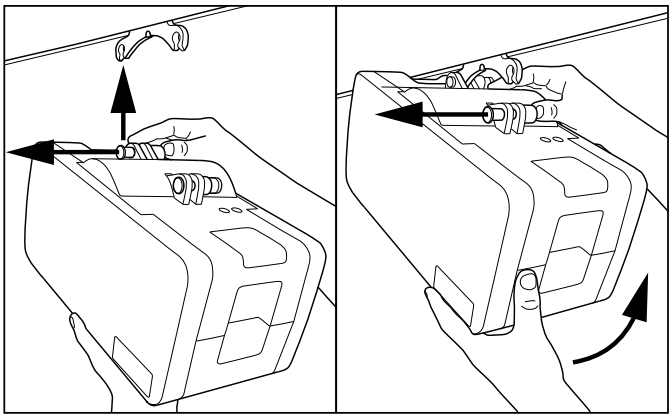


Remove End stop and insert Trolley into rail. Mount end stop, and make sure it is securely fastened

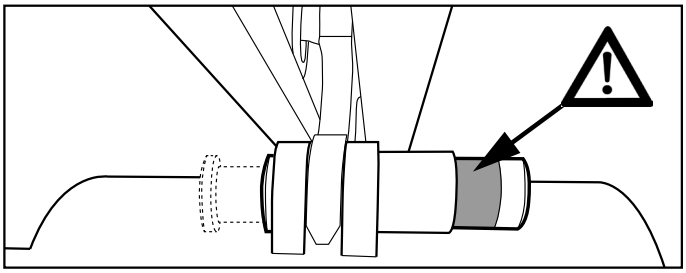
Make sure end stops are mounted in all ends of the Rail system before using the hoist!

Lifter installation

Mounting of Lifter on trolley. No tools required. The lifter has two connection points.



Connect one point first. Push button all the way in, and place lifter in connection point on trolley. Release button and make sure it is clearly showing green before connecting the next point.



Make sure both connection point buttons completely return and clearly show green after installation.

Emergency lowering cord and tube can be adjusted to the correct length (height) by cutting tube and cord.

Checklist after installation

Use this checklist to verify that the hoist is properly installed and can operate correctly an d safely before use.

- ☐ End stops on rail are installed after mounting of trolley
- ☐ Make sure that the hoist is properly fastened to the rail and that the lift does not have any loose parts.
- ☐ Perform one lift with normal load (60-80 kg)
- ☐ Make sure battery is fully charged.

How to use Molift Air

General Safety Precautions

Only use accessories and slings that are adjusted to fit the user, type of disability, size, weight and type of transfer.

Working pause ratio/Duty Cycle.

Molift Air should not be run constantly for more than 2 minutes (with maximum load), and rest for minimum 18 minutes. Duty Cycle 10%. (Intermittence according to standard ISO-EN 10535)

Safe Working Load

If maximum load (SWL) differs between hoist suspension and body support unit, then the lowest maximum load shall always be used

Molift lifters shall only be used to lift persons. Never use the lifter to lift or move objects of any kind.

Before use / Daily check

Inspection to be performed daily or before use:

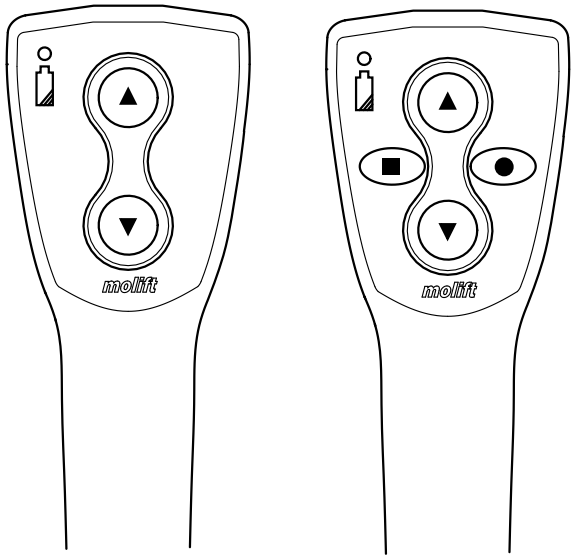
- ☐ Inspect lifter and rail system has no visible damage, defects or deformations
- ☐ Make sure suspension connection and all detachable parts are properly connected and secured
- ☐ Test emergency stop button and emergency lowering
- ☐ Make sure battery indicator or service light is not illuminated
- ☐ Make sure lifting strap does not have visible damage or frays.
- ☐ Test run lifters operation functions and make sure lifter does not make any abnormal sounds

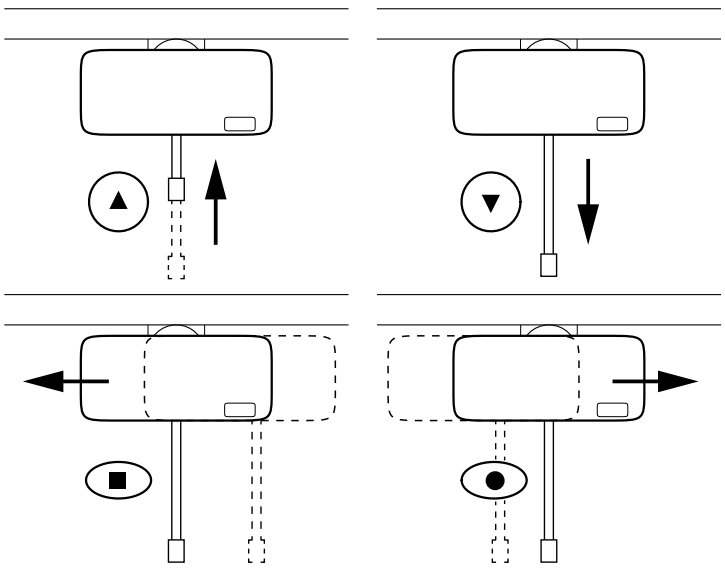
If there are any faults or defects, the lift needs to be taken out of operation and marked "out of order"

Hand control

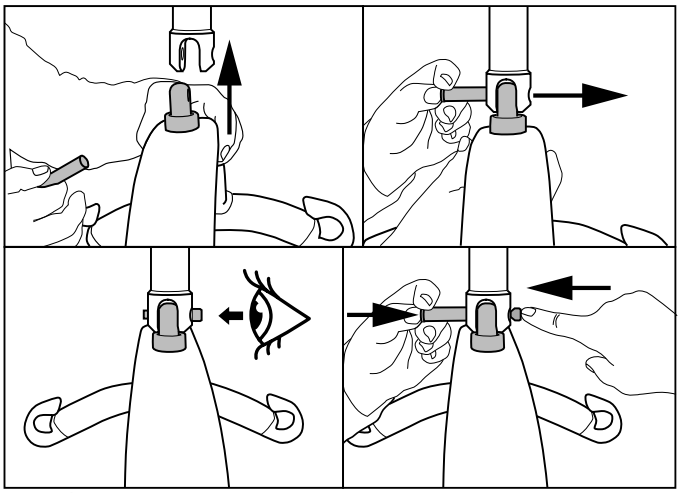
The Hand control has 2 buttons for lifting and lowering, or 4 buttons if the hoist is equipped with propulsion. The Hand control has an indicator light that will illuminate when battery level is low and the lifter requires charging

Do not pull Hand control to move the hoist along the rail





Mounting Suspension

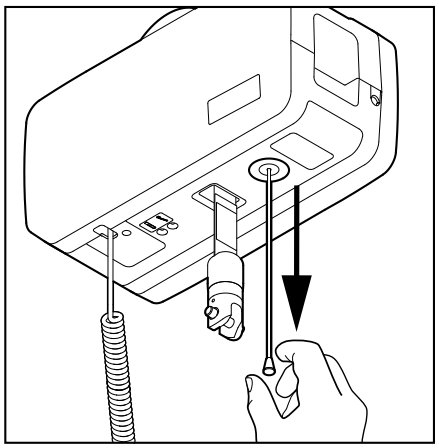


1. Align suspension in connection point.
2. Push button on locking pin and insert all the way through.
3. Make sure locking pin is properly fastened
4. Push button and push bolt from opposite side while holding in button to remove locking pin.

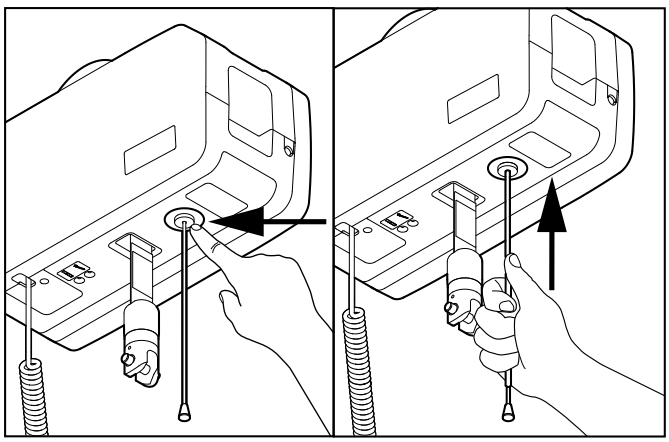
Emergency Stop / Emergency lowering

Emergency Stop

Activation and reset of emergency stop:

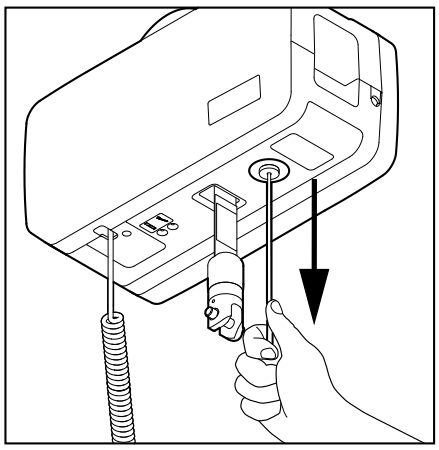


Pull to activate emergency stop. The button will come out, and hoist will stop.



Push with finger or use tube on cord to push button back in to reset emergency stop.

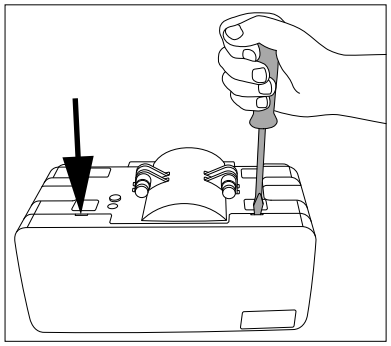
Electrical Emergency Lowering



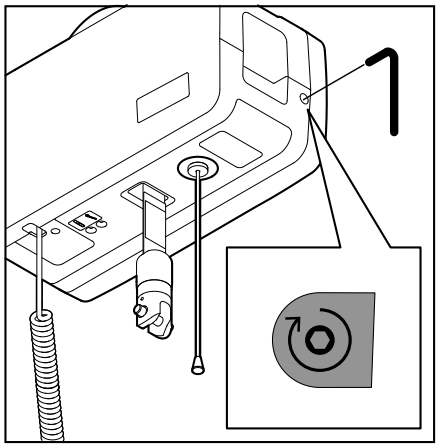
Pull and hold to start lowering.

Manual Emergency lowering

Allen key or bit for power drill can be found inside the lifter. Remove cover to locate.



Push down and press cover outwards with a flat screwdriver in the two slots to open cover.
Locate sticker over the hole for manual emergency lowering. Punch hole or remove sticker and insert tool. Rotate clockwise to lower lifting belt. Using a power drill is recommended.



Lifter must be sent to service after performing manual emergency lowering.

Electronics

Transport and Operating Conditions

Transport and Storage

For long time storage it is recommended that the emergency stop button is activated (pulled out). The lifter can be stored and transported under temperatures between -25 - 70 °C.

Operating

The lifter is designed for use at standard room temperatures (+5 to +40°C).
Air Pressure: 70 - 106 kPa
Relative Humidity: 15 - 93 %
Following storage or transport at other temperatures leave the lifter in a room with a suitable temperature until it reaches a safe operating temperature.

Medical electrical equipment requires special precautions regarding electromagnetic compatibility (EMC). Portable or mobile radio communication equipment may affect the medical electrical equipment, and should be kept minimum 25 cm (10 inches) from the lifters electronics.

Batteries

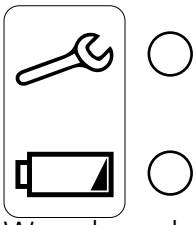
Molift Air has a 26.4 V NiMH battery pack. The battery has a life expectancy of approx. 500 charge cycles.

Used batteries must be disposed of as special waste according to local rules and regulations. Do not dispose in general waste

Batteries must be fully charged and depleted completely a couple of times before it achieves full capacity. Also follow this procedure if the lifter has not been in use for a long period (3-4 weeks)

Battery and Service indicator

The lifter has two indicator lights.



Wrench symbol / Service light
Battery symbol / Battery light

The electrical system has a power save function which will turn off the electrical system after ten minutes without activity. All lights will turn off. The system is activated when pushing one of the operating buttons

Battery Light

The battery indicator light will illuminate and make a sound when battery level is low and the lifter requires charging. When this occurs the lifter will have sufficient power available for one full lifting cycle with max load. When battery is critically low it is only possible to lower the lifting belt.

Service Light

The lifters electronics record the loads lifted and number of lifts. After a certain period of operation a signal is given to indicate that service is required.

Service light	*Mode*
No light	Power saving (Stand by)
Green	Ready for use
Yellow	Order service
Red	Perform service
Red + sound	Perform service immediately

Service scope

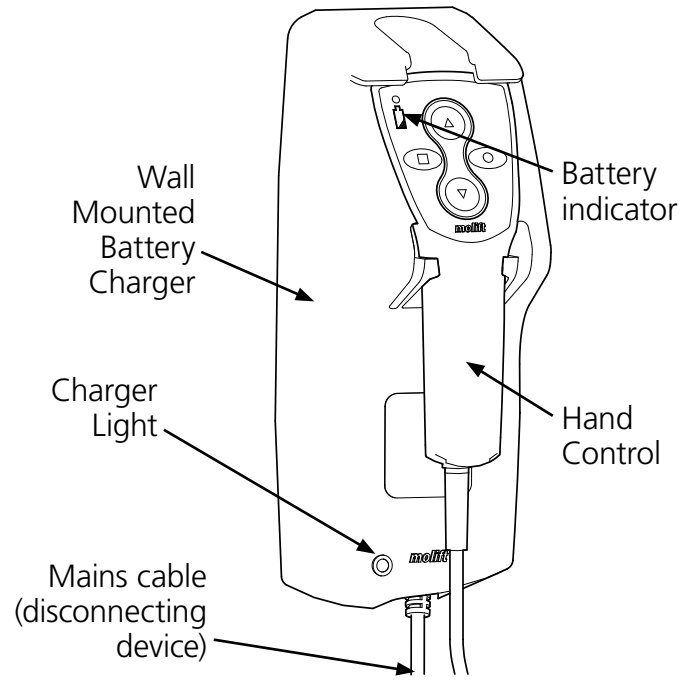
Service involves replacing the lifting belt and inspection/replacement of worn parts. This must be carried out by authorized personnel.

Service is needed when the service light is red (calculated 5.000 lifts in weight class 2), or service is required after 5 years if the service counter not has displayed red yet.

Charging

Molift Air can be charged in two ways;
Through hand control with a wall mounted battery charger, or through the rail with In Rail Charging.

Charging through Hand Control



Battery Charger

The lifter is charged through the Hand control. The battery charger shall be mounted to a vertical wall surface close to a power outlet, minimum 120 cm above the floor. The charger has to be used outside the patient environment. The Charger must be placed or installed in a way that makes it easy to disconnect mains cable plug. Take care not to damage the cable. The charger can be connected to the power outlet at all times, and the hand control should be placed in the charger console when the lifter is not in use.

Charger for handcontrol Nomad/AIR.
Art. no.: 1240100

Charger Light

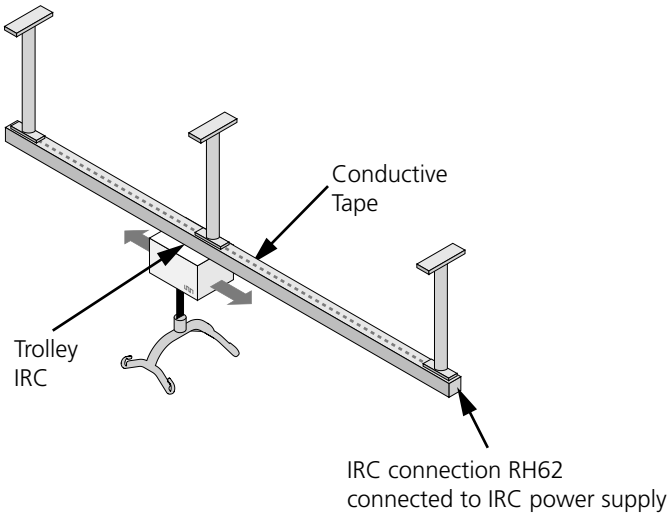
Description of charger light:

Charger light	*Mode*
Yellow	Ready for use, no battery connected
Yellow	Initialization
Red	Fast Charge
Green/Yellow	Top-off charge
Green	Trickle charge
Red/Green	Error

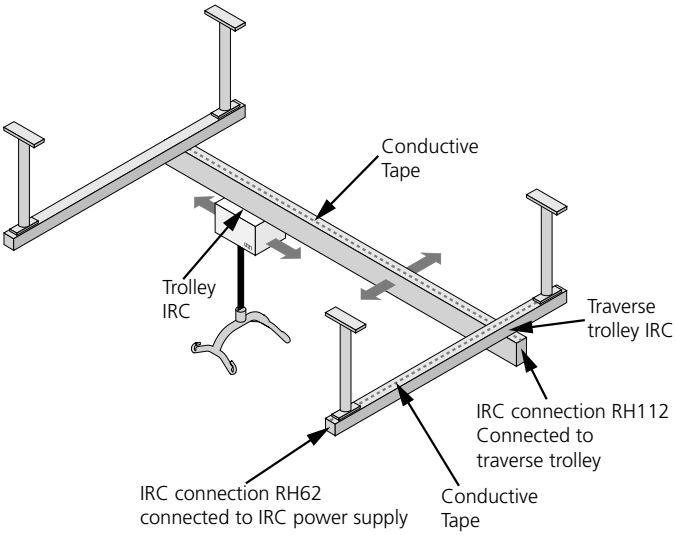
IRC - In Rail Charging

The lifter is charged through a built in charger in lift motor for continuous charging through the entire rail system length.

Molift Air IRC has a built in charger, connected to the battery. It must be installed with IRC Trolley in a rail system with a conductive tape. The IRC trolley is connected to the battery charger inside the Molift Air IRC. The IRC trolley is always in contact with the the conductive tape inside the rail. The IRC power supply is connected to the conductive tape through IRC connection at the end of the rail, and supplies power to the battery charger inside Molift Air IRC.



IRC fits both Single rail and Traverse systems.


Conductive Tape
Trolley IRC
Traverse trolley IRC
IRC connection RH112 Connected to traverse trolley
IRC connection RH62 connected to IRC power supply
Conductive Tape

IRC Power Supply
Art. no.: 2510119
Charger 2515 DC/DV (Part of Molift Air IRC)
Art. no.: 2510147

Transfer

Plan the lifting operation in advance to ensure that it is as safe and smooth as possible. Remember to work ergonomically. Assess the risks and take notes. The assistant is responsible for the safety of the user.

Molift Air can be used with both 2-point and 4-point suspension for different types of transfers; sitting, recumbent or ambulating.

Using Slings

It is important that the sling has been tested with the individual user and for the intended lifting situation.

Read User Manual for the sling prior to use.

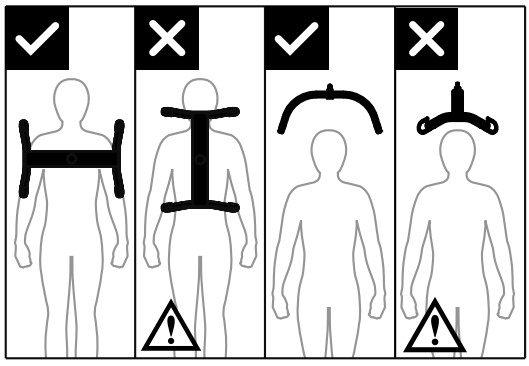
Do not to use damaged or badly worn slings.

Slings made by other manufacturers

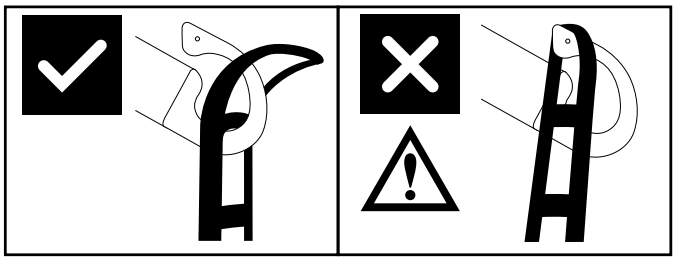
We recommend only using Molift slings. Etac shall not be liable for faults or accidents that can occur when using slings made by other manufacturers.

Lifting and lowering

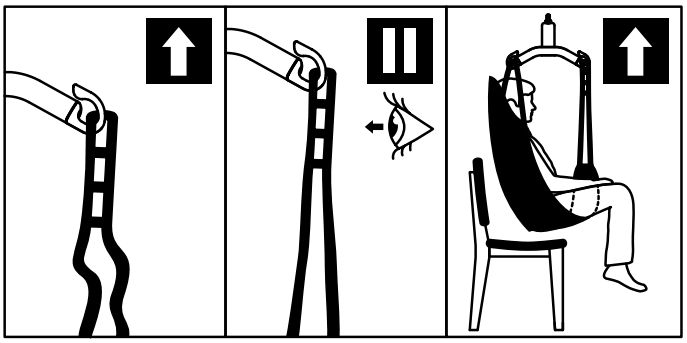
When moving the user, stand to the side of the person you are lifting. Make sure that arms and legs do not obstruct the seat, bed, etc. Keep eye contact with the user to help them feel safe.



The 4-point suspension must always be positioned across the user, to prevent the user from unintentionally sliding out of the sling.



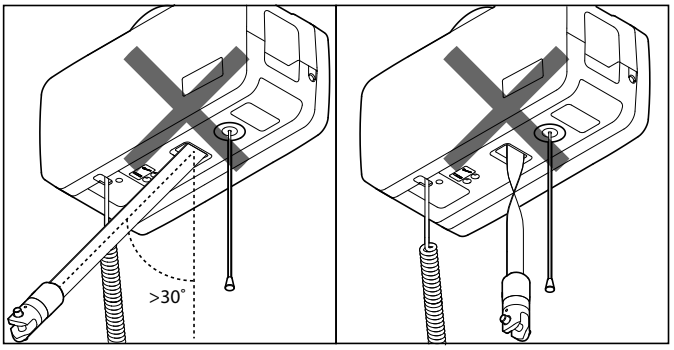
The suspensions hook design prevents sling to be inadvertently detached when mounted correct.



1. Check that the sling is correctly fitted around the user and that the strap loops are correctly fitted to the suspension hooks.
2. Stretch the sling straps without lifting the user. Ensure that all four loops of the sling are securely fastened to avoid the user slipping or falling.
3. Lift user, and perform transfer.

Angle sensor

The hoist has a directional safety feature that prevents lifting if angle on lifting strap is to steep.



If the hoist doesn't respond to Hand control "up" button, it might be because lifting strap angle is to steep, or lifting belt is twisted and sensor is activated.

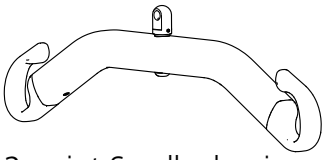
Accessories

Recommended optional equipment and accessories for Molift Air.

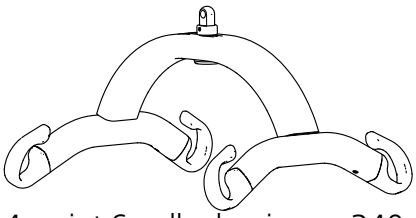
Suspensions

Molift Air can be used with 2 or 4 point suspension.

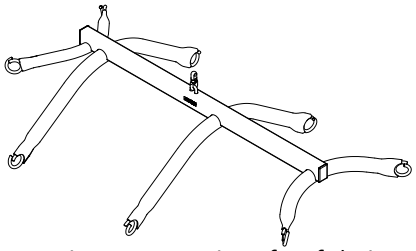
Aluminum suspension



2-point Small, aluminum, 340 mm,
Art. no.: 1830003
2-point Medium, aluminum, 440 mm,
Art. no.: 1830002
2-point Large, aluminum, 540 mm,
Art. no.: 1830001



4-point Small, aluminum, 340 mm,
Art. no.: 1830012
4-point Medium, aluminum, 440 mm,
Art. no.: 1830011
4-point Large, aluminum, 540 mm,
Art. no.: 1830010
4-point X-Large, aluminum, 640 mm,
Art. no.: 1530006



8-point suspension for fabric stretcher, steel
Art. no.: 2140003

Scale

Molift Scale Set (without Suspension)
Art. no.: 1840000
Can be combined with all Molift Air compatible suspensions. Scale is approved Class III. The scale can also calculate BMI (Body Mass Index) with a single touch. Read the manual that comes with the weight scale prior to use.

Slings

Molift supplies a wide selection of slings for different types of transfers.
The Molift RgoSling sling series is developed to be combined with a 4-point suspension but the sling also works with a 2-point suspension.
See the combination list in the slings user manual for the correct sling and suspension combination.
The Molift RgoSling sling series is available in sizes XXS – XXL, in polyester and polyester mesh.

Rgosling Mediumback Padded (XS-XXL)
Rgosling Highback Padded (XS-XXL)
Rgosling Mediumback Net (XXS-XXL)
Rgosling Highback Net (XXS-XXL)
Rgosling Toilet Lowback (XXS-XXL)
Rgosling Toilet Highback (XXS-XXL)
Rgosling Ampu Mediumback (XXS-XXL)
Rgosling Ampu Highback (XXS-XXL)
Rgosling Ambulating Vest
Rgosling Comfort Highback (S-L)
RgoSling Fabric Stretcher

Accessories:

Rgosling Extension Loops
Art. no.: 1721600
Rgosling Ambulating Vest Groin strap (XXS-XL)

Maintenance

Cleaning and disinfection

Clean on a regular basis. Clean surfaces with a damp cloth using an appropriate pH-neutral detergent. Do not use solvents or strong liquids, this may damage surfaces on the lifter. For disinfection when needed; use isopropyl alcohol. Avoid abrasive cleaning products. Check emergency stop and emergency lowering after cleaning. The lift should not be exposed to running water.

Make sure not to damage or remove labels when cleaning.

Reconditioning

Follow cleaning and installation procedure, complete periodic inspection and use checklist after installation to recondition the lifter.

Recycling

Refer to "Recycling instructions" for how to properly dispose of product. This can be found on www.etac.com.

Spare Parts

A list of spare parts is available on request.

Periodic Inspection

Periodic Inspection Scope

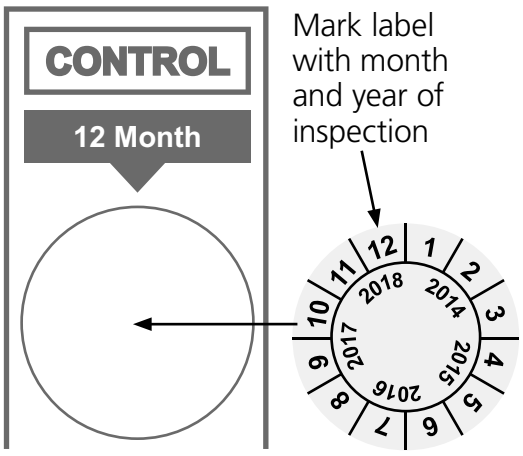
Periodic inspection is a visual examination (particularly of the hoist's load bearing structure and lifting mechanism with attachments, brakes, controls, safety devices and person-support devices) according to Periodic Inspection Report for Molift Air. This can be found on www.etac.com.

Periodic Inspection shall be performed at least once a year or more frequently if required by local requirements. The inspection must be performed by service personnel authorized by Etac. Contact Etac for training and authorization or recommendation of an approved service partner.

When performing a periodic inspection, the inspector shall fill out the inspection report for Molift Air. The reports should be retained by the person(s) responsible for servicing the hoist. If the inspection reveals defects and damages, the owner shall be notified and a copy of the report should be sent to Etac, molift@etac.com.

In the event of danger to safety, the hoist shall immediately be taken out of service and marked clearly with "out of order" and shall not be used until the hoist is repaired

When periodic inspection is completed the inspector shall mark the hoist with a sticker on the control label showing the date when periodic inspection is performed. The control label can be found on the inside of the Side cover, and this will then indicate when next service should be performed.



Troubleshooting

Symptom	Possible Cause/Action
The lifter does not respond to Hand control action	Emergency Stop is activated. Deactivate by pushing button back in.
	The lifters electronics is overheated. Wait for it to cool down.
	Hand control is not plugged in properly. Open cover and plug in Hand control. Hand control or plug or cord can be broken an should be replaced.
The lifter does not respond to Hand control up button	Lifting strap angle sensor is activated. Adjust lifting strap or move hoist to reduce lifting strap angle.

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